

WHAT IS CLAIMED IS:

1. A light source device for three-dimensional display having an image display means, wherein the image display means forms an image using transmitted light, the light source device comprising:

an LED array having white LEDs or RGB LEDs arranged in two horizontal rows one above the other; and

an LED control means for performing an on-off control on the horizontal rows of the white LEDs or RGB LEDs in the LED array.

2. A light source device for three-dimensional display according to claim 1, wherein the display is a three-dimensional display to present different images to right and left eyes of an observer and the upper and lower LED arrays constitute a light source portion for presenting an image for the right eye and a light source portion for presenting an image for the left eye, respectively.

3. A light source device for three-dimensional display according to claim 2, wherein the three-dimensional display has a position identifying means which measures a position of an observer relative to the three-dimensional display and outputs a corresponding position signal, and the LED control means performs a turn-on control on the white LEDs or RGB LEDs based on the position information so as to keep an image viewable by the observer.

4. A light source device for three-dimensional display according to claim 2, wherein the three-dimensional display has a controller operated by the observer, and the LED control means performs an on-off control on the white LEDs or RGB LEDs based on operation information from the controller so as to change an image viewed by the observer.

5. A light source device for three-dimensional display according to claim 2,

wherein the three-dimensional display has a position identifying means which counts the number of observers, measures positions of the observers relative to the display and outputs corresponding position signals, and the LED control means performs an on-off control on the white LEDs or RGB LEDs based on the position information so as to keep images viewable by the observers.

6. A light source device for three-dimensional display according to claim 2, wherein the LED control means performs a turn-on control on the right-eye image light source portion and the left-eye image light source portion of the LED array.

7. A light source device for three-dimensional display according to claim 2, wherein the LED control means changes an interval between lighted parts of the right-eye image light source portion and the left-eye image light source portion of the LED array according to a distance of an observer from the display.

8. A light source device for three-dimensional display according to claim 1, wherein the two horizontal rows, one above the other, of the white LEDs or RGB LEDs in the LED array is arranged such that the white LEDs or RGB LEDs in one of the rows are placed side by side with or staggered to those in the other row, and the LED control means performs the on-off control on the horizontal rows of the white LEDs or RGB LEDs in the LED array.

9. A light source device for three-dimensional display according to any one of claims 1 to 8, wherein the LED control means turns on appropriate white LEDs in the LED array and scans the illuminating LEDs across the LED array at high speed in a horizontal direction.

10. A light source device for three-dimensional display according to any one of claims 1 to 9, which is used on three- or two-dimensional displays of television sets, game machines, personal computers, cell phones or mobile terminals.